

SOME NEW LEPIDOPTERA FROM THE EAST.

By THE HON. WALTER ROTHSCHILD.

PAPILIONIDAE.

1. *Troides priamus caelestis* subsp. nov.

♂. In colour like *T. priamus urvilleanus*; smaller; the costal streak of forewing narrower in cell, the posterior streak extending down to base of wing, not interrupted in middle, though here the blue scaling is less dense; margin of hindwing much more scalloped than in *urvilleanus*, the marginal black border wider. On underside the edge of the yellowish green outer area of the hindwing deeply sinuate between veins 5 and 7, less deeply also between veins 7 and 8, the yellowish streak before vein 8 reaching down to praecostal vein, broad, not separated from the yellowish area between veins 7 and 8, basal third of the costal vein covered with yellowish green scales; edge of cell very thinly black only between origin of nervules 4 and 7, while in *urvilleanus* this black border extends to origin of vein 2. Hindwing with or without a golden yellow spot between veins 7 and 8 above and below: one specimen has three small golden yellow submarginal spots between veins 4 and 7.

♀. Wings deeper in colour above and below than in *urvilleanus*, and much more constant in markings. Forewing with a large grey patch in cell, widest in front (18 to 22 mm.), its basal edge very oblique, outer edge sinuate in middle, sinns very variable in width and depth. Three discal patches between submedian fold and vein 4; the lower one the smallest, mostly concave outwardly, sometimes reduced to a short linear spot; the second the largest, varying little in the twenty odd specimens before me, always evenly concave distally, convex or pointed proximally, about 12 mm. long; the upper patch also elongate, less regular in shape, not concave distally, varying in length from 6 to 15 mm. Upon these three patches follows, between veins 4 and 9, a series of five markings, of which the two posterior ones are the smallest and sometimes obsolete; the three upper ones generally elongate and triangular, concave distally; the two markings between veins 5 and 7 are mostly joined to the two upper spots of a submarginal series; this latter row of spots is always complete, though the middle spots are often much reduced in size. Tear-shaped patches of hindwing, both above and below, more deeply sinuate distally between veins 4 and 6.

On underside the discal patches of the hindwing are cream-colour, shading into light chrome-yellow distally; the **black** spot between veins 7 and 8 more basal than in *urvilleanus*, its basal edge being only 4 mm. distant from the point of origin of the seventh nervule.

Mesonotum with olive-buff median stripe. Basal segments of abdomen more blackish than in *urvilleanus*.

Hab. St. Aignan, Lonisiade Archipelago, August to November 1897 (A. S. Meek); type: ♂. A series of both sexes.

2. *Papilio polydorus aignan* subsp. nov.

♂ ♀. Comes very close to the form from the Key Islands (*thessalia* Swinh.), and has like this a red head: but differs in the red hairs of the front of the head

being much mixed with black ones, and in the posterior red spots of the upperside of the hindwing being more dusted over with black scales. From the Queensland form, which has the head similar in colour, it differs in the white patches in the cell of the hindwing and between veins 5 and 6 being as small as in *thessalia*. The forms of *polydorus* from New Guinea, the D'Entrecasteaux Islands, the Bismarck Archipelago, and the Solomon Islands have black heads.

Hab. St. Aignan, Louisiade Archipelago, August to November 1897 (A. S. Meek): type: ♀. Some ♂♂ and ♀♀.

3. *Papilio euchenor neohannoveranus* subsp. nov.

♂. Marginal spots on both wings larger than in either *depilis* or *norohibernicus*. Forewing above with four subapical spots, more or less rounded, the last small. Median band as in *norohibernicus*, but on forewing posteriorly narrower. On underside of hindwing the orange-ochraceous luniform spots somewhat smaller than in the race from New Ireland; the black mark between veins 7 and 8 somewhat intermediate in form between *depilis* and *norohibernicus*, but nearer the latter.

♀. Marginal and subapical spots as in ♂. Median band narrower than in both the allied forms, shaded with brown at inner edge. On forewing all the patches separated, in consequence of the veins being scaled black; the spot between submedian fold and vein 2 subrotundate, about 6 mm. wide, separated from the patch before it by an interspace of $1\frac{1}{2}$ mm. On hindwing the patch between veins 5 and 6 more constricted than in *norohibernicus*. Underside differs as in ♂.

Hab. New Hanover, Bismarck Archipelago, March and April 1897 (Captain H. C. Webster): type: ♀. A number of ♂♂, one ♀.

4. *Papilio euchenor misimanus* subsp. nov.

Close to *P. euchenor intercastellanus* Rothsch., but differs in the ♂ having on the upperside of the forewing four or five instead of three subapical spots, and in the marginal spots of the underside of the hindwing being in ♂ and especially in ♀ smaller. The ♀ has generally 4 subapical spots on the upperside of the forewing, but there is one specimen in the series which has only three. The black colour of underside of hindwing extends in ♂ along costal margin to near middle.

Hab. St. Aignan (Misima), Louisiade Archipelago, August to November 1897 (A. S. Meek): type: ♂. A series of both sexes.

5. *Papilio ulysses gabrielis* subsp. nov.

As large as *ulysses* from Amboina, the hindwing somewhat narrower anteriorly and hence appearing more elongate: tails much broader.

♂. *Upperside.* The blue area with a purplish sheen, the blue scales not so dense as in the *males* of the other subspecies of *ulysses*, much interspersed with black scales. On forewing the area occupies the greater half, or about two-thirds, of the cell, and the basal portions of the interspaces between vein 5 and hinder margin; the postcellular patches are much shorter than in *autolytus* and *ulysses*, the tips of the last three being 19 mm., the tip of the small patch before vein 3 about 20 mm. distant from edge of wing. In most specimens (incl. of *type*) there is a small blue patch before the base of vein 4, another before vein 5, and one or two more beyond, and in front of, the upper angle of the cell. The hairy discal stripes are very heavy, the four posterior ones touching each other for about 10 mm.

The blue area of the hindwing is more reduced than in any other form : the blue scales are sparse near the edge of the area. Midway between veins 2 and 3 the blue scaling has an extent of only 11 mm. ; the preceding patches are considerably smaller, the black colour at veins 4 and 5 being only 3 to 4 mm. distant from cell.

Underside similar to that of *ulysses ulysses* ; but forewing with a faint patch of grey scales in cell, and the grey scaling on disc of hindwing much sparser ; the submarginal spots of hindwing deeper ochraceous, the upper one less rounded, the black outer border being posteriorly more developed, but not so much as in *autolytus* ; the patch behind vein 4 subtriangular.

♀. Resembles in the extent of the blue area *ulysses melanotica* Hagen from Dampier Island, but the blue area is more purplish, the submarginal spots of the hindwing above are heavier, the two spots between veins 2 and 4 having the shape of large angles. On underside the submarginal spots of hindwing are much more bright ochraceous than in *melanotica*, the last but two subtriangular as in ♂, the first much broader than in *melanotica*.

Hub. St. Gabriel, Admiralty Islands, February 1897 (Captain H. C. Webster) ; type : ♂. A series of ♂♂, one ♀.

6. *Papilio codrus auratus* subsp. nov.

♀. Wings shaped as in *codrus codrus*. Band on upperside chrome-yellow (Ridgway, *Nomencl. of Colours*), shaped as in *codrus medon* from New Guinea, but the two posterior spots smaller ; the patch between veins 1 and 2 shorter in a basi-distal direction than the patch before it. The grey scaling on the hindwing stops about 5 mm. short of the apex of the cell, but extends in abdominal region to near the tip of vein 1. On underside the band is shaped as above, but covered with thin white scales. The white costal patch on hindwing is narrow and short, not reaching vein 7, and stands 14 mm. from the tip of vein 8.

Hub. St. Gabriel, Admiralty Islands, February 1897 (Captain H. C. Webster) ; 2 ♀♀.

NYMPHALIDAE.

7. *Cethosia gabrielis* sp. nov.

♂♀. Resembles *obscura* Guér., of which it is a representative. Upperside, white spots of forewing small, nearly all rounded, the upper one sometimes subtriangular, diameter $1\frac{1}{3}$ to 2 mm. ; spots on hindwing more than twice as large as those on forewing, ovate, all of nearly equal size, except the last, which is wider and incised in middle (being composed of two spots merged together), farther from outer margin than in *obscura*. Costal region of hindwing without reddish orange patches in ♂.

Underside much deeper in colour than in *obscura*, blue-black. The white spots of the forewing often more arrowhead-shaped than above, mostly larger ; basal region brighter red ; without indication of red spots between apex of cell and postdiscal series of white spots, but with some grey spots, which are larger than in *obscura*. Hindwing with the red colour reduced in ♂ to a spot in cell, another in front of it, and a third, often obsolete, spot behind cell ; ♀ without red markings ; black bars of *obscura* here indicated in consequence of the bluish grey border of the bars being clearly marked. Besides the postdiscal series of white spots, which are slightly larger than above, but of the same shape, seldom concave outwardly, obviously

shaded at the edges with bluish grey, there is a discal series of small bluish grey uniform spots, parallel to the postdiscal series and about $1-1\frac{1}{2}$ mm. distant from it; a series of black dots between the two rows, somewhat deeper black than the ground-colour of the wing; in middle of wing there is another series of indistinct black dots, to the upper three of which are joined outwardly bluish grey spots, while the last two or three are bordered basally by a bluish-grey line.

Hab. St. Gabriel, Admiralty Islands, February 1897 (Captain H. C. Webster): type: ♂. A series of both sexes.

AGARISTIDAE.

8. *Mimeusemia lombokensis javana* subsp. nov.

♀. Resembles in markings more the ♂ than the ♀ of the Lombok form; the postmedian band of the forewing is much more dilated behind, being 4 mm. broad at vein 3; on the hindwing the black border is narrower in middle, but wider behind, than in ♂ of *lombokensis*, thus appearing deeply sinuate; the black patch in middle of costal margin on underside of hindwing, joined to the black costal edge of wing, is much more clearly marked.

Hab. Lawang, E. Java, 1897 (bought from Mr. H. Fruhstorfer); 2 ♀♀.

GEOMETRIDAE.

9. *Milionia callimorpha brevis* subsp. nov.

♂♀. Hindwing considerably shorter than in *M. callimorpha euroa* and *callimorpha*, but longer than in *M. brevipennis*. Band of forewing as in *euroa*, generally somewhat broader anteriorly. Band of hindwing above narrower than in *euroa* and *callimorpha*; on underside it is in the ♂ wider than in both these forms, reaches to vein 8, and is posteriorly, between vein 2 and abdominal margin, densely washed over with coal-black scaling that forms two confluent patches, rest of band without such scaling; in ♀ the band is not much narrowed in front, being 3 to 4 mm. wide at vein 8 and 5 or 6 mm. at abdominal margin; the band extends mostly beyond vein 8.

In both sexes the black marginal area of the hindwing contains sometimes a yellow spot posteriorly of very variable size; in one of the *males* there is, above, a yellow spot between veins 7 and 8.

Abdomen as in *callimorpha callimorpha*.

Hab. St. Aignan, Louisiade Archipelago, August to December 1897 (A. S. Meek); type: ♂. A long series.

HEPIALIDAE.

10. *Oenetus marginatus misimanus* subsp. nov.

♂♀. Differs from typical *marginatus* in both sexes in the marginal band of the hindwing being considerably wider in front and extending to the anterior angle of the wing. In ♀ the middle band of brown spots on the upperside of the forewing consists of three rounded spots, one behind and two before middle of disc, and a number of brown lines.

Hab. St. Aignan (Misima), Louisiade Archipelago, August to November 1897 (A. S. Meek); type: ♀. Some specimens of both sexes.